Release notes for ENDF/B Development n-092_U_237 evaluation

May 26, 2017

- `checkr` Warnings:

  1. A previous error halted parsing of the current section
     MAT=9234, MF= 1, MT=451 (1): Parsing stopped

     ```
     ERROR(S) FOUND IN MAT=9234, MF= 1, MT=451
         SECTION CANNOT BE CHECKED FROM SEQUENCE NUMBER     482 TO     568
     ```

- `checkr` Errors:

  1. A variable is outside the allowed ENDF range
     MAT=9234, MF= 1, MT=451 (0): Variable range

     ```
     ERROR(S) FOUND IN MAT=9234, MF= 1, MT=451
         MOD =    3 OUT OF RANGE    0 -    1          RECORD NUMBER    482
     ```

  2. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=9234, MF= 1, MT=452 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=9234, MF= 1, MT=452
         SECTION  1/452 NOT IN DIRECTORY               RECORD NUMBER    569
     ```

  3. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=9234, MF= 1, MT=455 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=9234, MF= 1, MT=455
         SECTION  1/455 NOT IN DIRECTORY               RECORD NUMBER    580
     ```

  4. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=9234, MF= 1, MT=456 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=9234, MF= 1, MT=456
         SECTION  1/456 NOT IN DIRECTORY               RECORD NUMBER    588
     ```

  5. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=9234, MF= 1, MT=458 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=9234, MF= 1, MT=458
         SECTION  1/458 NOT IN DIRECTORY               RECORD NUMBER    597
     ```

  6. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=9234, MF= 2, MT=151 (0): Directory (b)

     ```
     ERROR(S) FOUND IN MAT=9234, MF= 2, MT=151
         SECTION  2/151 NOT IN DIRECTORY               RECORD NUMBER    610
     ```

  7. Missing a section in directory so your directory is messed up. This error will break everything else
     MAT=9234, MF= 3, MT= 1 (0): Directory (b)

1

```
    ERROR(S) FOUND IN MAT=9234, MF= 3, MT=  1
      SECTION  3/  1 NOT IN DIRECTORY                 RECORD NUMBER     814
```

8. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=9234, MF= 3, MT= 2 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=9234, MF= 3, MT=  2
      SECTION  3/  2 NOT IN DIRECTORY                 RECORD NUMBER     857
```

9. Missing a section in directory so your directory is messed up. This error will break everything else
   MAT=9234, MF= 3, MT= 3 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=9234, MF= 3, MT=  3
      SECTION  3/  3 NOT IN DIRECTORY                 RECORD NUMBER     900
```

10. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 4 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=9234, MF= 3, MT=  4
      SECTION  3/  4 NOT IN DIRECTORY                 RECORD NUMBER     943
```

11. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 16 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 16
      SECTION  3/ 16 NOT IN DIRECTORY                 RECORD NUMBER     971
```

12. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 17 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 17
      SECTION  3/ 17 NOT IN DIRECTORY                 RECORD NUMBER     990
```

13. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 18 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 18
      SECTION  3/ 18 NOT IN DIRECTORY                 RECORD NUMBER    1005
```

14. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 37 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 37
      SECTION  3/ 37 NOT IN DIRECTORY                 RECORD NUMBER    1037
```

15. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 51 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 51
         SECTION  3/ 51 NOT IN DIRECTORY                    RECORD NUMBER    1047
```

16. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 52 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 52
         SECTION  3/ 52 NOT IN DIRECTORY                    RECORD NUMBER    1075
```

17. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 53 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 53
         SECTION  3/ 53 NOT IN DIRECTORY                    RECORD NUMBER    1102
```

18. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 54 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 54
         SECTION  3/ 54 NOT IN DIRECTORY                    RECORD NUMBER    1129
```

19. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 55 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 55
         SECTION  3/ 55 NOT IN DIRECTORY                    RECORD NUMBER    1156
```

20. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 56 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 56
         SECTION  3/ 56 NOT IN DIRECTORY                    RECORD NUMBER    1182
```

21. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 57 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 57
         SECTION  3/ 57 NOT IN DIRECTORY                    RECORD NUMBER    1208
```

22. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 58 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 58
         SECTION  3/ 58 NOT IN DIRECTORY                    RECORD NUMBER    1234
```

23. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 59 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 59
           SECTION  3/ 59 NOT IN DIRECTORY                    RECORD NUMBER    1259
```

24. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 60 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 60
           SECTION  3/ 60 NOT IN DIRECTORY                    RECORD NUMBER    1284
```

25. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 61 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 61
           SECTION  3/ 61 NOT IN DIRECTORY                    RECORD NUMBER    1309
```

26. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 62 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 62
           SECTION  3/ 62 NOT IN DIRECTORY                    RECORD NUMBER    1333
```

27. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 63 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 63
           SECTION  3/ 63 NOT IN DIRECTORY                    RECORD NUMBER    1357
```

28. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 64 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 64
           SECTION  3/ 64 NOT IN DIRECTORY                    RECORD NUMBER    1381
```

29. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 65 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 65
           SECTION  3/ 65 NOT IN DIRECTORY                    RECORD NUMBER    1404
```

30. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 66 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 66
           SECTION  3/ 66 NOT IN DIRECTORY                    RECORD NUMBER    1427
```

31. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 67 (0): Directory (b)

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```
        ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 67
          SECTION  3/ 67 NOT IN DIRECTORY                    RECORD NUMBER    1450
```

32. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 68 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 68
          SECTION  3/ 68 NOT IN DIRECTORY                    RECORD NUMBER    1472
```

33. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 69 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 69
          SECTION  3/ 69 NOT IN DIRECTORY                    RECORD NUMBER    1494
```

34. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 70 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 70
          SECTION  3/ 70 NOT IN DIRECTORY                    RECORD NUMBER    1516
```

35. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 71 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 71
          SECTION  3/ 71 NOT IN DIRECTORY                    RECORD NUMBER    1537
```

36. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 72 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 72
          SECTION  3/ 72 NOT IN DIRECTORY                    RECORD NUMBER    1558
```

37. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 73 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 73
          SECTION  3/ 73 NOT IN DIRECTORY                    RECORD NUMBER    1579
```

38. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 74 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 74
          SECTION  3/ 74 NOT IN DIRECTORY                    RECORD NUMBER    1599
```

39. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 75 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 75
     SECTION  3/ 75 NOT IN DIRECTORY                RECORD NUMBER    1619
```

40. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT= 91 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=9234, MF= 3, MT= 91
     SECTION  3/ 91 NOT IN DIRECTORY                RECORD NUMBER    1638
```

41. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 3, MT=102 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=9234, MF= 3, MT=102
     SECTION  3/102 NOT IN DIRECTORY                RECORD NUMBER    1657
```

42. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 4, MT= 2 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=9234, MF= 4, MT=  2
     SECTION  4/  2 NOT IN DIRECTORY                RECORD NUMBER    1685
```

43. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 4, MT= 18 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 18
     SECTION  4/ 18 NOT IN DIRECTORY                RECORD NUMBER    1787
```

44. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 4, MT= 51 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 51
     SECTION  4/ 51 NOT IN DIRECTORY                RECORD NUMBER    1790
```

45. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 4, MT= 52 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 52
     SECTION  4/ 52 NOT IN DIRECTORY                RECORD NUMBER    1890
```

46. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 4, MT= 53 (0): Directory (b)

```
ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 53
     SECTION  4/ 53 NOT IN DIRECTORY                RECORD NUMBER    1988
```

47. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 4, MT= 54 (0): Directory (b)

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```
      ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 54
         SECTION  4/ 54 NOT IN DIRECTORY                 RECORD NUMBER    2086
```

48. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 4, MT= 55 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 55
         SECTION  4/ 55 NOT IN DIRECTORY                 RECORD NUMBER    2137
```

49. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 4, MT= 56 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 56
         SECTION  4/ 56 NOT IN DIRECTORY                 RECORD NUMBER    2235
```

50. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 4, MT= 57 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 57
         SECTION  4/ 57 NOT IN DIRECTORY                 RECORD NUMBER    2284
```

51. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 4, MT= 58 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 58
         SECTION  4/ 58 NOT IN DIRECTORY                 RECORD NUMBER    2380
```

52. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 4, MT= 59 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 59
         SECTION  4/ 59 NOT IN DIRECTORY                 RECORD NUMBER    2429
```

53. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 4, MT= 60 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 60
         SECTION  4/ 60 NOT IN DIRECTORY                 RECORD NUMBER    2478
```

54. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 4, MT= 61 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 61
         SECTION  4/ 61 NOT IN DIRECTORY                 RECORD NUMBER    2527
```

55. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 4, MT= 62 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 62
          SECTION  4/ 62 NOT IN DIRECTORY                RECORD NUMBER    2576
```

56. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 4, MT= 63 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 63
          SECTION  4/ 63 NOT IN DIRECTORY                RECORD NUMBER    2625
```

57. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 4, MT= 64 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 64
          SECTION  4/ 64 NOT IN DIRECTORY                RECORD NUMBER    2674
```

58. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 4, MT= 65 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 65
          SECTION  4/ 65 NOT IN DIRECTORY                RECORD NUMBER    2723
```

59. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 4, MT= 66 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 66
          SECTION  4/ 66 NOT IN DIRECTORY                RECORD NUMBER    2772
```

60. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 4, MT= 67 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 67
          SECTION  4/ 67 NOT IN DIRECTORY                RECORD NUMBER    2821
```

61. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 4, MT= 68 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 68
          SECTION  4/ 68 NOT IN DIRECTORY                RECORD NUMBER    2870
```

62. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 4, MT= 69 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 69
          SECTION  4/ 69 NOT IN DIRECTORY                RECORD NUMBER    2919
```

63. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF= 4, MT= 70 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 70
           SECTION  4/ 70 NOT IN DIRECTORY               RECORD NUMBER    2968
```

64. Missing a section in directory so your directory is messed up. This error will break everything else
    $MAT=9234$, $MF=4$, $MT=71$ (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 71
           SECTION  4/ 71 NOT IN DIRECTORY               RECORD NUMBER    3017
```

65. Missing a section in directory so your directory is messed up. This error will break everything else
    $MAT=9234$, $MF=4$, $MT=72$ (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 72
           SECTION  4/ 72 NOT IN DIRECTORY               RECORD NUMBER    3066
```

66. Missing a section in directory so your directory is messed up. This error will break everything else
    $MAT=9234$, $MF=4$, $MT=73$ (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 73
           SECTION  4/ 73 NOT IN DIRECTORY               RECORD NUMBER    3115
```

67. Missing a section in directory so your directory is messed up. This error will break everything else
    $MAT=9234$, $MF=4$, $MT=74$ (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 74
           SECTION  4/ 74 NOT IN DIRECTORY               RECORD NUMBER    3162
```

68. Missing a section in directory so your directory is messed up. This error will break everything else
    $MAT=9234$, $MF=4$, $MT=75$ (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 4, MT= 75
           SECTION  4/ 75 NOT IN DIRECTORY               RECORD NUMBER    3209
```

69. Missing a section in directory so your directory is messed up. This error will break everything else
    $MAT=9234$, $MF=5$, $MT=18$ (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 5, MT= 18
           SECTION  5/ 18 NOT IN DIRECTORY               RECORD NUMBER    3257
```

70. Missing a section in directory so your directory is messed up. This error will break everything else
    $MAT=9234$, $MF=5$, $MT=455$ (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF= 5, MT=455
           SECTION  5/455 NOT IN DIRECTORY               RECORD NUMBER    3267
```

71. Missing a section in directory so your directory is messed up. This error will break everything else
    $MAT=9234$, $MF=6$, $MT=16$ (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=9234, MF= 6, MT= 16
          SECTION  6/ 16 NOT IN DIRECTORY                RECORD NUMBER    3858
```

72. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=9234, MF= 6, MT= 17 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=9234, MF= 6, MT= 17
          SECTION  6/ 17 NOT IN DIRECTORY                RECORD NUMBER    5345
```

73. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=9234, MF= 6, MT= 37 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=9234, MF= 6, MT= 37
          SECTION  6/ 37 NOT IN DIRECTORY                RECORD NUMBER    6084
```

74. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=9234, MF= 6, MT= 91 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=9234, MF= 6, MT= 91
          SECTION  6/ 91 NOT IN DIRECTORY                RECORD NUMBER    6477
```

75. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=9234, MF= 8, MT= 16 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=9234, MF= 8, MT= 16
          SECTION  8/ 16 NOT IN DIRECTORY                RECORD NUMBER    9031
```

76. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=9234, MF= 8, MT= 17 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=9234, MF= 8, MT= 17
          SECTION  8/ 17 NOT IN DIRECTORY                RECORD NUMBER    9034
```

77. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=9234, MF= 8, MT=102 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=9234, MF= 8, MT=102
          SECTION  8/102 NOT IN DIRECTORY                RECORD NUMBER    9037
```

78. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=9234, MF=12, MT= 18 (0): Directory (b)

```
      ERROR(S) FOUND IN MAT=9234, MF=12, MT= 18
          SECTION 12/ 18 NOT IN DIRECTORY                RECORD NUMBER    9041
```

79. Missing a gamma spectrum for continuum of gammas
MAT=9234, MF=12, MT= 18 (1): No gamma spectrum

```
      ERROR(S) FOUND IN MAT=9234, MF=12, MT= 18
          CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

80. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=9234, MF=12, MT=102 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=9234, MF=12, MT=102
       SECTION 12/102 NOT IN DIRECTORY              RECORD NUMBER    9046
```

81. Missing a gamma spectrum for continuum of gammas
MAT=9234, MF=12, MT=102 (1): No gamma spectrum

```
    ERROR(S) FOUND IN MAT=9234, MF=12, MT=102
       CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

82. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=9234, MF=13, MT= 3 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=9234, MF=13, MT=  3
       SECTION 13/  3 NOT IN DIRECTORY             RECORD NUMBER    9052
```

83. Missing a gamma spectrum for continuum of gammas
MAT=9234, MF=13, MT= 3 (1): No gamma spectrum

```
    ERROR(S) FOUND IN MAT=9234, MF=13, MT=  3
       CONTINUUM PHOTONS REQUIRE A SECTION IN MF=15
```

84. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=9234, MF=14, MT= 3 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=9234, MF=14, MT=  3
       SECTION 14/  3 NOT IN DIRECTORY             RECORD NUMBER    9065
```

85. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=9234, MF=14, MT= 18 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=9234, MF=14, MT= 18
       SECTION 14/ 18 NOT IN DIRECTORY             RECORD NUMBER    9067
```

86. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=9234, MF=14, MT=102 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=9234, MF=14, MT=102
       SECTION 14/102 NOT IN DIRECTORY             RECORD NUMBER    9069
```

87. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=9234, MF=15, MT= 3 (0): Directory (b)

```
    ERROR(S) FOUND IN MAT=9234, MF=15, MT=  3
       SECTION 15/  3 NOT IN DIRECTORY             RECORD NUMBER    9072
```

88. Missing a section in directory so your directory is messed up. This error will break everything else
MAT=9234, MF=15, MT= 18 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF=15, MT= 18
            SECTION 15/ 18 NOT IN DIRECTORY                RECORD NUMBER     9446
```

89. Missing a section in directory so your directory is messed up. This error will break everything else
    MAT=9234, MF=15, MT=102 (0): Directory (b)

```
        ERROR(S) FOUND IN MAT=9234, MF=15, MT=102
            SECTION 15/102 NOT IN DIRECTORY                RECORD NUMBER     9479
```

- `fizcon` Warnings:

    1. It is OK for uncertainty to be bigger than value
       MAT=9234, MF= 1, MT=458 (1): Big unc

```
        ERROR(S) FOUND IN MAT=9234, MF= 1, MT=458
            ERROR GREATER THAN VALUE AT COMPONENT # 39
            ERROR GREATER THAN VALUE AT COMPONENT # 51
            ERROR GREATER THAN VALUE AT COMPONENT # 53
```

    2. It is OK for uncertainty to be bigger than value
       MAT=9234, MF= 1, MT=458 (2): Big unc

```
        ERROR(S) FOUND IN MAT=9234, MF= 1, MT=458
         No problems to report
```

- `psyche` Errors:

    1. A probability distribution is negative. This is bad.
       FILE 4 / SECTION 53 / DISTRIBUTION IS NEGATIVE / FROM -9.9708E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 9.2745E-05 (0): Neg. prob.

```
        FILE  4
            SECTION  53
                DISTRIBUTION IS NEGATIVE
                      FROM -9.9708E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  9.2745E-05
```

    2. A probability distribution is negative. This is bad.
       FILE 4 / SECTION 55 / DISTRIBUTION IS NEGATIVE / FROM -9.9768E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS 5.2869E-05 (0): Neg. prob.

```
        FILE  4
            SECTION  55
                DISTRIBUTION IS NEGATIVE
                      FROM -9.9768E-01 TO -1.0000E+00 NEGATIVE PROBABILITY IS  5.2869E-05
```

- `fudge-4.0` Warnings:

    1. Potential scattering hasn't converted, you need more L's!
       resonances / resolved / MultiLevel_BreitWigner (Error # 0): potentialScatteringNotConverged

```
        WARNING: Potential scattering hasn't converged by L=0 at E=200.0 eV, xs[0]/xs[0]=100.0% > 0.1%
```

- `fudge-4.0` Errors:

1. Found a negative probability
   reaction label 0: n + U237 / Product: n / Distribution: / angularTwoBody - XYs2d:
   (Error # 0): Negative prob.

   ```
   WARNING: Negative probabilities encountered. Incident energy: 2.e7 eV, worst case: -0.000478840510429
   WARNING: Negative probabilities encountered. Incident energy: 2.2e7 eV, worst case: -0.00682735064299
   WARNING: Negative probabilities encountered. Incident energy: 2.4e7 eV, worst case: -0.0151622648288
   WARNING: Negative probabilities encountered. Incident energy: 2.6e7 eV, worst case: -0.0305277496318
           ... plus 2 more instances of this message
   ```

2. Found a negative probability
   reaction label 1: n + U237_e1 / Product: n / Distribution: / angularTwoBody - XYs2d:
   (Error # 0): Negative prob.

   ```
   WARNING: Negative probabilities encountered. Incident energy: 2.6e7 eV, worst case: -0.00725686602594
   WARNING: Negative probabilities encountered. Incident energy: 2.8e7 eV, worst case: -0.042779545965
   WARNING: Negative probabilities encountered. Incident energy: 3.e7 eV, worst case: -0.0559832482777
   ```

3. Found a negative probability
   reaction label 2: n + U237_e2 / Product: n / Distribution: / angularTwoBody - XYs2d:
   (Error # 0): Negative prob.

   ```
   WARNING: Negative probabilities encountered. Incident energy: 2.6e7 eV, worst case: -0.00396551302733
   WARNING: Negative probabilities encountered. Incident energy: 2.8e7 eV, worst case: -0.0410169686068
   WARNING: Negative probabilities encountered. Incident energy: 3.e7 eV, worst case: -0.0552101282043
   ```

4. Found a negative probability
   reaction label 3: n + U237_e3 / Product: n / Distribution: / angularTwoBody - XYs2d:
   (Error # 0): Negative prob.

   ```
   WARNING: Negative probabilities encountered. Incident energy: 3.e7 eV, worst case: -0.0673925
   ```

5. Found a negative probability
   reaction label 5: n + U237_e5 / Product: n / Distribution: / angularTwoBody - XYs2d:
   (Error # 0): Negative prob.

   ```
   WARNING: Negative probabilities encountered. Incident energy: 3.e7 eV, worst case: -0.0477335
   ```

6. Calculated and tabulated Q values disagree.
   reaction label 27: n[multiplicity:'2'] + U236 (Error # 0): Q mismatch

   ```
   WARNING: Calculated and tabulated Q-values disagree: -5261566.040710449 eV vs -5125780. eV!
   ```

7. Calculated and tabulated Q values disagree.
   reaction label 28: n[multiplicity:'3'] + U235 (Error # 0): Q mismatch

   ```
   WARNING: Calculated and tabulated Q-values disagree: -11838523.59161377 eV vs -1.1671e7 eV!
   ```

8. Calculated and tabulated Q values disagree.
   reaction label 29: n[multiplicity:'4'] + U234 (Error # 0): Q mismatch

   ```
   WARNING: Calculated and tabulated Q-values disagree: -16536350.41372681 eV vs -1.69687e7 eV!
   ```

9. Fission energy release seems unphysical.
   reaction label 30: n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'6 delayed'] + gamma [total fission] / fissionEnergyReleased: / delayedNeutronKE: (Error # 0): Fiss. en. rel. (h)

   ```
   WARNING: Fission energy release seems unphysical. Worst case: 19270.0
   ```

10. Calculated and tabulated Q values disagree.
    reaction label 31: U238 + gamma (Error # 0): Q mismatch

    ```
    WARNING: Calculated and tabulated Q-values disagree: 6184480.158508301 eV vs 6.1538e6 eV!
    ```

- `njoy2012` Warnings:

  1. There is a problem with the fission energy release.
     heatr...prompt kerma (0): HEATR/nheat (3)

     ```
     ---message from nheat---changed q from   1.878210E+08 to   1.815193E+08
                             for mt  18
     ```

- `njoy2012` Errors:

  1. An angular distribution is negative
     acer...monte carlo neutron and photon data (0): Neg. P(Ejμ) (b)

     ```
     ---message from ptleg2---negative probs found
                        53 for mt=  2 e= 2.000E+07
     ```

  2. An angular distribution is negative
     acer...monte carlo neutron and photon data (1): Neg. P(Ejμ) (b)

     ```
     ---message from ptleg2---negative probs found
                        268 for mt=  2 e= 2.200E+07
     ```

  3. An angular distribution is negative
     acer...monte carlo neutron and photon data (2): Neg. P(Ejμ) (b)

     ```
     ---message from ptleg2---negative probs found
                        403 for mt=  2 e= 2.400E+07
     ```

  4. An angular distribution is negative
     acer...monte carlo neutron and photon data (3): Neg. P(Ejμ) (b)

     ```
     ---message from ptleg2---negative probs found
                        667 for mt=  2 e= 2.600E+07
     ```

  5. An angular distribution is negative
     acer...monte carlo neutron and photon data (4): Neg. P(Ejμ) (b)

     ```
     ---message from ptleg2---negative probs found
                        795 for mt=  2 e= 2.800E+07
     ```

  6. An angular distribution is negative
     acer...monte carlo neutron and photon data (5): Neg. P(Ejμ) (b)

```
                 ---message from ptleg2---negative probs found
                              874 for mt=  2 e= 3.000E+07
```

7. An angular distribution is negative
   acer...monte carlo neutron and photon data (6): Neg. P(Ejμ) (b)

```
                 ---message from ptleg2---negative probs found
                              18 for mt= 51 e= 2.600E+07
```

8. An angular distribution is negative
   acer...monte carlo neutron and photon data (7): Neg. P(Ejμ) (b)

```
                 ---message from ptleg2---negative probs found
                              199 for mt= 51 e= 2.800E+07
```

9. An angular distribution is negative
   acer...monte carlo neutron and photon data (8): Neg. P(Ejμ) (b)

```
                 ---message from ptleg2---negative probs found
                              237 for mt= 51 e= 3.000E+07
```

10. An angular distribution is negative
    acer...monte carlo neutron and photon data (9): Neg. P(Ejμ) (b)

```
                 ---message from ptleg2---negative probs found
                              14 for mt= 52 e= 2.600E+07
```

11. An angular distribution is negative
    acer...monte carlo neutron and photon data (10): Neg. P(Ejμ) (b)

```
                 ---message from ptleg2---negative probs found
                              194 for mt= 52 e= 2.800E+07
```

12. An angular distribution is negative
    acer...monte carlo neutron and photon data (11): Neg. P(Ejμ) (b)

```
                 ---message from ptleg2---negative probs found
                              238 for mt= 52 e= 3.000E+07
```

13. An angular distribution is negative
    acer...monte carlo neutron and photon data (12): Neg. P(Ejμ) (b)

```
                 ---message from ptleg2---negative probs found
                              3 for mt= 53 e= 3.000E+07
```

14. An angular distribution is negative
    acer...monte carlo neutron and photon data (13): Neg. P(Ejμ) (b)

```
                 ---message from ptleg2---negative probs found
                              3 for mt= 55 e= 3.000E+07
```